

REMARKS

This amendment responds to the Office Action dated January 4, 2008, in which the Examiner rejected claim 21 under 35 U.S.C. § 101 and rejected claims 1-2, 4-19 and 21-22 under 35 U.S.C. § 103.

Applicant would like to thank the Examiner for the telephone interview on March 19, 2008.

As indicated above, claim 21 has been amended in order to be directed to statutory subject matter. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claim 21 under 35 U.S.C. § 101.

Claim 1 claims an image generating system, claim 18 claims an image generating apparatus, claim 19 claims an image generating method, claim 21 claims a computer program product, and claim 22 claims a computer-readable recording medium storing a program for generating an image. The image generating system, apparatus, method, computer program product and computer-readable storage medium storing a program includes storing first shape data which represents a three dimensional shape of a first area including at least a part of an object area in a real world. A camera shoots a second area including at least a part of the object area. An image generating apparatus generates an image of the object area using a picture shot by the camera and the first shape data. A composing unit composes the image of the first area with the image of the second area to generate the image of the object area. The image of the object area is generated by complementing the area of the object area not shot by the camera with the image of the first area generated from the first shape data.

By (a) storing first shape data representing a three dimensional shape of a first area including at least a part of an object area in a real world and (b) complementing an area in the

object area not shot by the camera with the image of the first area generated from the first shape data, as claimed in claims 1, 18, 19, 21 and 22, the claimed invention provides an image generating system, apparatus, method, computer program product, and computer-readable recording medium in which an image shot by a camera can be complemented by an image found in the real world, but was not captured by the camera to reduce the breakdown of the background and to correctly reproduce an image. The prior art does not show, teach or suggest the invention as claimed in claims 1, 18, 19, 21 and 22.

Claims 1-2, 5-7, 18-19 and 21-22 were rejected under 35 U.S.C. § 103 as being unpatentable over *Sato*, *et al.* (EP1117074), in view of *Yonezawa, et al.* (U.S. Publication No. 2002/0075286).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

Sato, et al. appears to disclose virtual objects 102 which appear in an augmented reality (AR) game. Each virtual object 102 is a three-dimensional virtual object rendered by computer graphics. A player 101 can review a video obtained by superimposing the virtual objects 102 on a real space from the subjective view point by wearing a head-mounted display (HMD) 107 [0035]. The HMD 107 possesses video camera(s) inside or on it to capture the video from the same viewpoint as the player's eyes [0034]. An objective sensing camera 103 senses a state in which a player 101 is playing the game. The sensed video is an actual sensed video which does not include any images of the virtual objects 102 [0036]. A game apparatus 104 controls the game, generates the videos of the virtual objects 102 and generates the video to output to the

HMD 107 and to a display 106. The game apparatus 104 outputs to the HMD 107 a video obtained by composing an actual sensed video of the real space input from HMD 107 and videos of the virtual objects 102 viewed from the subjective viewpoint. The game apparatus 104 also outputs to display 106 a video obtained by composing videos of the virtual objects 102 viewed from an objective viewpoint and the actually sensed video sensed by the camera 103 [0037]. A table 105 as a real object is used as a stage in the game [0038].

Thus, *Satoh, et al.* only discloses virtual objects 102 which are not found in the real world and which are generated by computer graphics [0035]. Applicant respectfully traverses the Examiner's statement that table 105 represents first shaped data stored in a data base. As explained in *Satoh, et al.* paragraphs [0037], [0050] and [0055], table 105 shown in display 106 is captured by cameras 103 and 107 and is not a virtual object stored in a database. Nothing in *Satoh, et al.* shows, teaches or suggests a database storing first shaped data representing a three-dimensional shape of a first area including at least a part of an object area in a real world as claimed in claims 1, 18-19 and 21-22. Rather, *Satoh, et al.* merely discloses virtual objects 102 superimposed with real objects such as table 105 captured by cameras 103 and 107.

Additionally, *Satoh, et al.* merely discloses composing an actually sensed video of the real space input from the HMD 107 and videos of the virtual objects 102 displayed on the HMD 107 as well as a video obtained by composing the videos of the virtual objects 102 and the actual sensed video sensed by camera 103 [0037]. Nothing in *Satoh, et al.* shows, teaches or suggests complementing an area of an object not shot by a camera with an image of the first area generated by the first shaped data of an object in a real world as claimed in claims 1, 18, 19, 21 and 22. Rather, *Satoh, et al.* only discloses composing virtual objects, not in the real world, with actual sensed video data from cameras 103, 107.

Yonezawa, et al. appears to disclose a system and method that generates a composite image by synthesizing a real space image captured from a photographing means, such as a video camera, and a virtual space image such as computer graphics [0002]. A MR (mixed reality) space image is displayed in real time in such a manner that a virtual space image is superimposed on a real space image to make the observer feel as if virtual space objects were present in the real space [0046]. The system converts the coordinates of real and virtual space objects to be merged with the MR space into a MR space coordinate system on which all the objects are handled [0047].

Thus, *Yonezawa, et al.* only discloses superimposing virtual space images on real space images. Nothing in *Yonezawa, et al.* shows, teaches or suggests complementing an area in an object area not shot by a camera with an image of the first area generated from the first shaped data from the real world as claimed in claims 1, 18-19, and 21-22. Rather, *Yonezawa, et al.* only discloses superimposing a virtual space image on a real space image (i.e. the virtual space image does not complement an area not shot by a camera).

Additionally, *Yonezawa, et al.* appears to disclose that a problem occurs when a virtual space object is present behind one or more real space objects [0049]. By using transparent virtual space objects, when a real image is synthesized, the real image is not overwritten, and only virtual space objects located behind any real space objects can be deleted [0050].

Thus, *Yonezawa, et al.* merely discloses deleting virtual space objects located behind real space objects. Nothing in *Satoh, et al.* shows, teaches or suggests complementing an area in an object area not shot by a camera with an image of a first area generated from first shaped data of the real world as claimed in claims 1, 18-19 and 21-22. Rather, *Satoh, et al.* merely discloses deleting virtual space objects located behind real space objects.

Since neither *Sato*, *et al.* or *Yonezawa*, *et al.* show, teach or suggest complementing an area in an object area not shot by a camera with an image generated from data of the real world as claimed in claims 1, 18-19 and 21-22, Applicant respectfully requests the Examiner withdraws the rejection to claims 1, 18-19 and 21-22 under 35 U.S.C. § 103.

Claims 2 and 5-7 depend from claim 1 and recite additional features. Applicant respectfully submits that claims 2 and 5-7 would not have been obvious within the meaning of 35 U.S.C. § 103 over *Sato*, *et al.* and *Yonezawa*, *et al.* at least for the reasons as set forth above. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 2 and 5-7 under 35 U.S.C. § 103.

Claims 4 and 8 were rejected under 35 U.S.C. § 103 as being unpatentable over *Sato*, *et al.*, in view of *Yonezawa*, *et al.*, and further in view of *Anabuki*, *et al.* (U.S. Patent No. 6,633,304). Claims 9-11 and 13-15 were rejected under 35 U.S.C. § 103 as being unpatentable over *Sato*, *et al.*, in view of *Yonezawa*, *et al.*, and further in view of *Ikeuchi* ("Modeling from Reality"). Claim 12 was rejected under 35 U.S.C. § 103 as being unpatentable over *Sato*, *et al.*, in view of *Yonezawa*, *et al.*, and further in view of *Anabuki*, *et al.* and *Ikeuchi*. Claims 16 and 17 were rejected under 35 U.S.C. § 103 as being unpatentable over *Sato*, *et al.*, in view of *Yonezawa*, *et al.*, and further in view of *Kondo* (U.S. Patent No. 6,812,924) and *Sawada* (U.S. Patent No. 5,844,625).

Applicant respectfully traverses the Examiner's rejection of the claims under 35 U.S.C. § 103. The claims have been reviewed in light of the Office Action, and for reasons which will be set forth below, Applicant respectfully requests the Examiner withdraws the rejection to the claims and allows the claims to issue.

As discussed above, since nothing in the combination of *Satoh, et al.* and *Yonezawa, et al.* show, teach or suggest the primary features as claimed in claim 1, Applicant respectfully submits that the combination of the secondary references with the primary references will not overcome the deficiencies of the primary references. Therefore, Applicant respectfully requests the Examiner withdraws the rejection to claims 4 and 8-17 under 35 U.S.C. § 103.

Thus, it now appears that the application is in condition for a reconsideration and allowance. Reconsideration and allowance at an early date are respectfully requested. Should the Examiner find that the application is not now in condition for allowance, Applicant respectfully requests the Examiner enters this amendment for purposes of appeal.

CONCLUSION

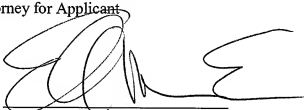
If for any reason the Examiner feels that the application is not now in condition for allowance, the Examiner is requested to contact, by telephone, the Applicant's undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed within the currently set shortened statutory period, Applicant respectfully petitions for an appropriate extension of time. The fees for such extension of time may be charged to Deposit Account No. 50-0320.

In the event that any additional fees are due with this paper, please charge our Deposit Account No. 50-0320.

Respectfully submitted,

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By: 

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